

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0878314033](#)  
**Status:** **Active**  
**Overview:** [milligrd](#)  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Shrouded, Lead-free, 40 Circuits, 0.38µm (15µ") Gold (Au) Plating, Center Polarization Slot, with Locking Windows, without PCB Locator, Void Position Circuit 21, Tube

**Documents:**

[3D Model](#) [Product Specification PS-87831-027 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87831](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrd](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 39  
 Circuits (maximum) 40  
 Circuits Detail Pin 21 Void  
 Color - Resin Black  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part Yes  
 Material - Metal Brass  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Vertical  
 PC Tail Length (in) 0.098 In  
 PC Tail Length (mm) 2.50 mm  
 PCB Locator No  
 PCB Retention None  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tube  
 Pitch - Mating Interface (in) 0.079 In  
 Pitch - Mating Interface (mm) 2.00 mm  
 Pitch - Term. Interface (in) 0.079 In  
 Pitch - Term. Interface (mm) 2.00 mm  
 Plating min: Mating (µin) 15  
 Plating min: Mating (µm) 0.38  
 Plating min: Termination (µin) 76  
 Plating min: Termination (µm) 1.88

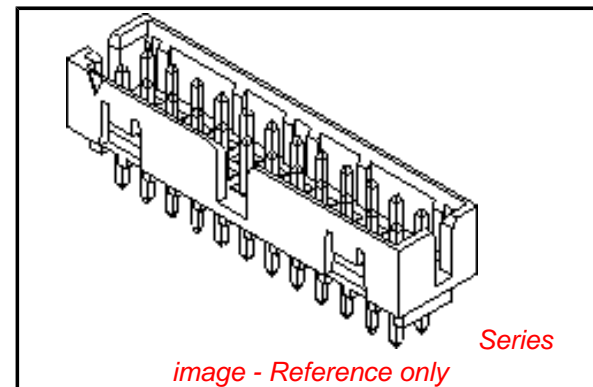


image - Reference only

**EU RoHS**

**ELV and RoHS  
 Compliant**

**REACH SVHC**

**Contains SVHC: No  
 Halogen-Free**

**Status**

**Not Halogen-Free**

**Need more information on product  
 environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**China RoHS**



**Search Parts in this Series**

[87831Series](#)

**Mates With**

[50394](#) Wire-to-Board Terminals. [51110](#) Wire-to-Board Crimp Housing. [87568](#) Wire-to-Board IDT Housings. [79107](#) Board-to-Board Top Entry Through Hole Receptacle. [79108](#) Board-to-Board FFC/FPC Top Entry Through Hole Receptacle. L

Polarized to Mating Part	Side Slots (2)
Polarized to PCB	No
Shrouded	Fully
Stackable	No
Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Through Hole

### **Electrical**

Current - Maximum per Contact	2A
Voltage - Maximum	125V

### **Solder Process Data**

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

### **Material Info**

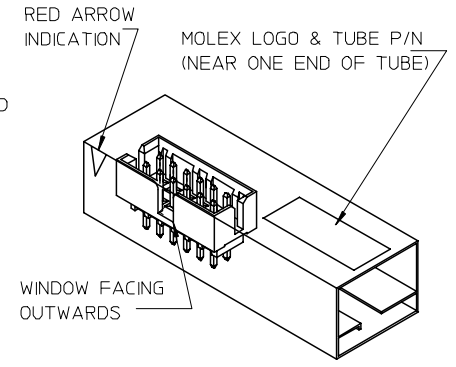
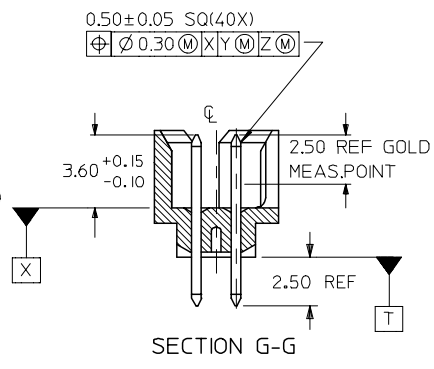
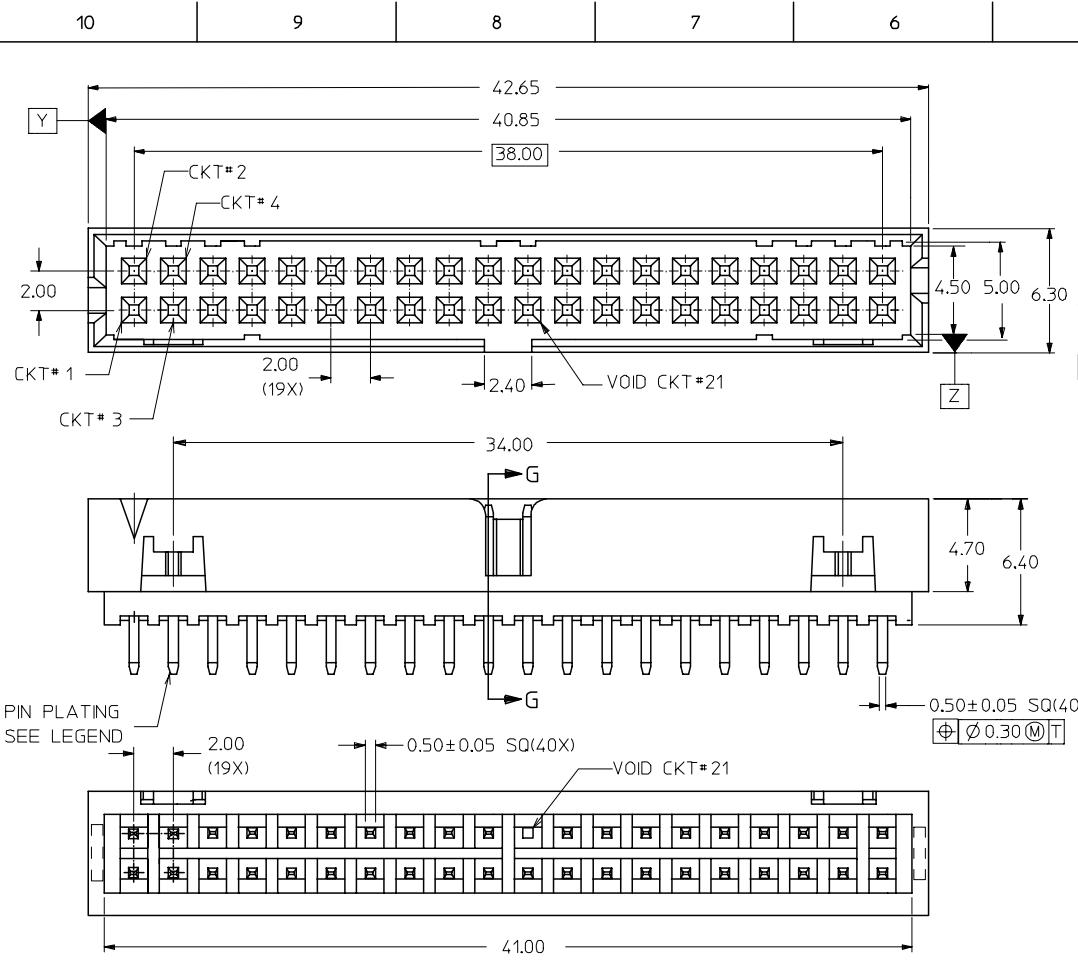
### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87831-043

This document was generated on 05/26/2010

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PART NO.	CKT SIZE	VOID CKT
87831-40**	40	21



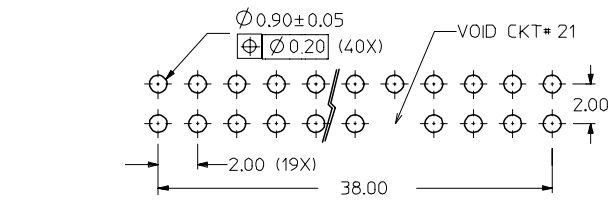
ORIENTATION OF PART IN TUBE  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY)

PART NUMBER LEGEND:

- 87831 - 40 \*\*
- CKT SIZE
  - PLATING OPTIONS
    - 33 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
    - 34 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.

NOTES:

- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- MATERIAL :  
HOUSING : NYLON 46, 30% G.F., UL94V-0 COLOR BLACK.  
PIN : PHOSPHOR BRONZE, SQ. 0.50MM
- PIN PUSHOUT FORCE : 0.91KG MIN. IN EITHER DIRECTION.
- THIS HEADER MATES WITH MOLEX :  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES  
b) 2mm MILLIGRID DUAL ROW IDT, 87568 SERIES.
- PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.



RECOMMENDED PCB PATTERN

ADD MOIST BAG NOTE  
EC NO: S2007-0892  
DRAWN: GEMENARLY  
CHKD: SXANG  
APPR: MLONG

REV	DESCRIPTION
A2	

QUALITY SYMBOLS	
$\nabla=0$	
$\nabla C=0$	
GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm
	INCH
4 PLACES	± ---
3 PLACES	± ---
2 PLACES	± 0.20
1 PLACE	± ---
ANGULAR ± 3 °	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE	
MM ONLY	
DRAWN BY	DATE
ATSEE	2004/08/26
CHECKED BY	DATE
SHONG	2004/11/22
APPROVED BY	DATE
SKTOH	2004/11/23
MATERIAL NO.	
SEE TABLE	
SIZE	A3

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
NTS	METRIC	$\nabla$
TITLE		
MGRID, SHROUDED HEADER VERTICAL W/SLOT & STANDOFFS		
MOLEX INCORPORATED		
DOCUMENT NO.	SHEET NO.	
SD-87831-043	1 OF 1	
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